

REMARKS

I. Formalities

Applicants thank the Examiner for acknowledging the claim for priority under 35 U.S.C. § 119, and receipt of the certified copy of the priority document submitted on February 18, 2005.

Applicants thank the Examiner for indicating that the Formal Drawings filed on February 18, 2005 are accepted.

II. Status of the Application

Claims 1-6 are all the claims pending in the Application. Claims 1-4 have been rejected.

The present response addresses each point of objection and rejection raised by the Examiner. Favorable reconsideration is respectfully requested.

III. Claim Rejections under 35 U.S.C. §103

The Examiner has rejected claims 1-6 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Japanese Patent No. JP 2002079803 to Teratani (hereinafter "Teratani"), and further in view of either one of U.S. Patent No. 4,193,437 to Powell (hereinafter "Powell") or U.S. Patent No. 4,837,266 to Sattelmeyer (hereinafter "Sattelmeyer"). Applicant respectfully traverses these rejections for *at least* the independent reasons stated below.

In response to Applicant's previous arguments that Comparative Example 2 in Table 1 of the present specification is similar to the teachings of the compositions in Teratini, and that Comparative Example 2 exhibits a low elastic modulus in 100% elongation and a low dynamic elastic modulus, which results in poor run flat durability, the grounds of rejection respond that the relevant composition is not that of Teratini, but rather the composition of Teratini modified in

view of either one of Powell or Sattelmeyer. Further, the grounds of rejection allege that the modified composition is substantially the same as that of the claimed invention and that therefore a skilled artisan would have expected the modified composition to demonstrate an elastic modulus and dynamic elastic modulus as claimed.

Additionally, the grounds of rejection agree with Applicant's previous arguments that none of the cited references teaches values for the parameters of elastic modulus and dynamic modulus. Nevertheless, the grounds of rejection allege that the modified composition proposed in the grounds of rejection is substantially the same as that of the claimed invention. As such, the grounds of rejection allege that a skilled artisan would have expected the modified composition to exhibit an elastic modulus of 5 to 20 MPa in 100 % elongation at 25°C and a dynamic elastic modulus of 10.5 MPa or less at a room temperature, as claimed.

Finally, in response to Applicant's previous arguments that claim 1 recites the feature of a rubber composition that exhibits both a high elastic modulus (i.e., an elastic modulus of 5 to 20 MPa in 100 % elongation at 25°C) and a low dynamic elastic modulus (i.e., a dynamic elastic modulus of 10.5 MPa or less at a room temperature) and that, therefore, the claimed invention achieves new and unexpected results, the grounds of rejection allege that the fact that Applicant has recognized another advantage which would flow naturally from following the teachings of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. Moreover, the grounds of rejection allege that the modified composition comprises a conjugated diene base polymer having a high vinyl bonding amount and a curable resin with a curing agent. The grounds of rejection further allege that, given the similarities between the modified composition and that of the claimed invention, a skilled artisan would have expected

the modified composition to demonstrate the both a high elastic modulus and a low dynamic elastic modulus, as claimed.

Applicant respectfully disagrees with the grounds of rejection and submits that the Examiner has ignored the fact that the claimed invention achieves new and unexpected results nowhere suggested in the prior art contrary to the requirements of MPEP §2141.

As explained in the present specification, aspects of the present invention provide a run flat tire which has both excellent run flat durability in running after the tire has been injured, and a high riding comfort in during usual running. In order to achieve this object, and others, it has been found that rubber compositions comprising the bead filler and/or the rubber reinforcing layer must exhibit both a high elastic modulus (i.e., an elastic modulus of 5 to 20 MPa) in 100% elongation at 25°C to obtain excellent run flat durability and a low dynamic elastic modulus (i.e., a dynamic elastic modulus of 10.5 MPa or less) at room temperature to obtain excellent riding comfort.

To this effect, the present specification explains that “[t]he elastic modulus in 100 % elongation has preferably a larger value because of necessity to support the load in run flat running.” (Page 11, lines 1-3). The specification also explains that “the dynamic elastic modulus (E’) at a room temperature has preferably a smaller value from the viewpoint of securing the riding comfort.” (Page 11, lines 3-5).

Thus, as explained in the specification, the present inventors discovered that the combination of a conjugate diene base polymer having a high vinyl bonding amount and a curable resin with a curing agent can achieve the two aforementioned moduli properties. Indeed, such a combination of the resin and the curing agent elevates the elastic modulus in

100% elongation, but elevates the dynamic elastic modulus (E') much less. (Page 11, lines 7-12). Therefore, less influence is exerted on the riding comfort, and the riding comfort can be controlled by varying an amount of a filler such as carbon black. (Page 11, lines 7-12).

As a general matter, a skilled artisan would recognize that in ordinary rubber compositions, when a dynamic elastic modulus is high, a corresponding elastic modulus in 100% elongation will also be high. Consequently, Applicant submits that the compositions claimed in claims 1-6, which result in a high elastic modulus in 100% elongation and a rather low dynamic elastic modulus, achieve new and unexpected results which would not have been obvious to one of ordinary skill in the art.

For example, as illustrated in Table 1, Applicant draws the Examiner's attention to a comparison between Example 2 and Comparative Example 3. As shown in Table 1, when a conventional BR (BR-01) was replaced with a BR having a vinyl bonding amount of 25% or more in the composition of Comparative Example 3 containing thermosetting resin and a curing agent, the elastic modulus in 100% elongation maintained the same value (i.e., 7.3), while the dynamic elastic modulus (E') decreased from 16.8 to 8.5.

In contrast, Applicant draws the Examiner's attention to a comparison between Example 2 and Comparative Example 2. When a thermosetting resin and a curing agent were incorporated into the composition of Comparative Example 2 containing a BR having a vinyl bonding amount of 25% or more, the elastic modulus in 100% elongation increased from 4.8 to 7.3 and the dynamic elastic modulus (E') also increased from 7.2 to 8.5.

Applicant respectfully submits that *at least* the above examples provide ample evidence of the unexpected and non-obvious results obtained from the present invention. As such,

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Applicant submits that claims 1-6 are patentable over the cited references for *at least* the above reasons and respectfully requests that the Examiner withdraw these rejections.

IV. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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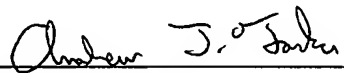
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